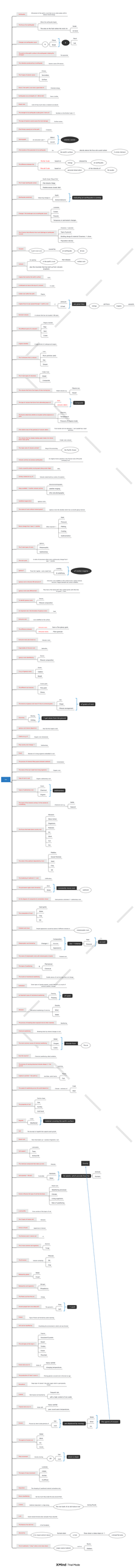

- Geo
  - Earthquake — (Movement of the earth's crust) that occurs when plates shift & release stored energy
  - The focus of an earthquake
    - Where the earthquake begins
    - The area on the fault where the rocks 1st
      - break
      - & move
  - Changes can earthquakes cause — &
    - Move
    - Break
    - & — Rock / Soil
  - The point on the earth's surface is the earthquake's shaking the strongest — The epicenter
  - The vibrations produced by an earthquake — Seismic waves OR tremors
  - The 3 types of seismic waves
    - Primary
    - Secondary
    - Surface
  - Rocks ↓ the earth's crust store a great deal of — Potential energy
  - Earthquakes occur @ depths of < 100 km B/C — Rock is brittle
  - Elastic limit — Limit of how much stress a material can absorb
  - The strength of an earthquake usually given ↓ terms of — Numbers on the Richter Scale 1–9
  - The type of [seismic wave] causes the most damage — Surface waves
  - [The Primary waves] act on the earth — Compress
  - Seismograph — An instrument used → detect / record — *seismic waves*
  - (The location of the epicenter) of an earthquake — On — the earth's surface — directly above the focus @ a point where — 3 circles intersect
  - The difference between the
    - Richter Scale — based on — energy — released by — an earthquake.
    - Mercalli Scale — based on — personal observation — of the intensity of — the quake.
  - The 3 major [earthquake zones]
    - Pacific Ocean "Ring of Fire"
    - Mid-Atlantic Ridge
    - Mediterranean-Asiatic Belt
  - [Earthquake prediction] — Observing changes in — Earth / Animal behavior — *indicating an earthquake is coming*
  - Changes ↓ the landscape can an earthquake cause
    - Landslides
    - Scarps
    - Fissures
    - Temporary or permanent changes.
  - The 4 factors that influence how much [damage an earthquake causes]
    - Closeness → epicenter
    - Type of ground
    - Building design & material Closeness → shore
    - Population density.
  - Tsunami — A giant ocean wave — caused by — an earthquake — @ sea.
  - volcano
    - An opening — in the earth's crust — that releases — molten rock
    - also the mountain that has built up from volcanic eruptions
  - magma that reaches the earth's surface — Lava
  - a hollowed-out area at the top of a volcano — A crater
  - molten rock within the earth — Magma
  - magma force its way upward through → earth's crust — if — pressure / & heat — *are great then* — energy — will force — magma — upwards
  - Dormant volcano — A volcano that has not erupted ↓ 100 years
  - The different parts of a volcano?
    - Magma chamber
    - Pipe
    - Vent
    - Crater
  - magma chamber — A large pocket of underground magma
  - The 3 emissions from a volcano
    - Lava
    - Rock particles (ash)
    - Gas
    - Stream
  - The 3 main types of volcanoes
    - Cinder Cone
    - Shield
    - Composite
  - The volcano that forms from layers of slow moving lava — Shield volcano e.g. — Mauna Loa / Hawaii
  - The type of volcano that forms from alternating layers of — lava / volcanic debris — *Composite*
  - The factors determine whether an eruption will be explosive or quiet
    - Chemistry
    - Temperature
    - Pressure of magma inside
  - (The relative sizes of the particles) of volcanic debris — From bombs (64 mm diameter) → ash (sand& flour-sized particles)
  - The volcano that has steeply sloping upper slopes, but whose bases slope gently — Cinder cone volcano
  - The major zone of volcanic activity? — Ring of Fire encircling — the Pacific Ocean
  - Volcanic activity can produce earthquakes — As magma moves upwards it may fracture rocks OR buckle overlying crust
  - Cracks caused by plates moving apart along ocean ridges — Rifts
  - Surtsey, Iceland an e.g. of — Volcanic island built by a series of eruptions
  - Ways available → monitor volcanic activity
    - Advanced photography
    - satellite imaging
    - infra-red photography
  - Solidified magma form — Igneous rocks
  - The names of rocks without mineral grains? — Igneous rocks like obsidian which has (a smooth glassy texture)
  - Rocks change from 1 type 1→ another — When exposed →
    - Heat
    - Pressure
    - Melting
    - Cooling
    - Sedimentation
  - The 3 main types of rocks
    - Igneous
    - Metamorphic
    - Sedimentary
  - The rock cycle — A series of processes where rocks continuously change from 1 type → another
  - Igneous? — "From fire" (ignite) – rocks made from — cooling / & solidifying — *of molten magma*
  - Igneous rock is intrusive OR extrusive if — Extrusive: Lava solidifies on the surface & has a glassy texture, Intrusive: Magma beneath the surface solidifies
  - Igneous rocks look different B/C — They have a fine texture B/C they cooled quickly with little time for grains → form
  - To identify igneous rocks
    - Texture
    - Mineral composition
  - An important role ↓ the formation of igneous rocks — Heat
  - Extrusive rock — Lava solidified on the surface
  - The difference between
    - Extrusive rocks — have a glassy grain
    - Intrusive rocks — More granular
  - Extrusive rocks also known as — Volcanic rocks
  - Huge bodies of intrusive rock — Batholiths
  - Igneous rocks identified by
    - Texture
    - Mineral composition
  - 3 e.g. of igneous rocks
    - Diorite
    - Gabbro
    - Basalt
  - The different rock textures
    - Coarse grain
    - Fine grain
    - Glassy
  - The texture an igneous rock have if it has no universal grains — Size / Shape / Mineral arrangement — *of grains of rock*
  - Quarrying — Blasting / Drilling — *→ get stone from the ground*
  - Igneous rock texture depend on — How fast the magma cools
  - Chalk an e.g. of — Organic rock (limestone)
  - May country rock change → — Sedimentary
  - Fossil — Remains of a living organism embedded ↓ rock
  - The process of minerals filling spaces between sediment — Cementation
  - The name of the rock made from living organisms — Organic rock
  - Type of rock is coal — Organic sedimentary rock
  - Types of sedimentary rock — Clastic / Chemical / Organic — *sedimentary*
  - The name of the minerals coming ↑ of the solution & crystallizing — Chemical rock e.g. — Halite / Gypsum
  - The forces that break down country rock
    - Abrasion
    - Wave Action
    - Organisms
    - Pollution
    - Ice
    - Wind
    - Sun
    - Rain
  - The order of the sediment deposited by rivers
    - Pebbles
    - Gravel Particles
    - Sand
    - Clay
    - Silt
  - The hardening of sediment 1→ rock — Lithification
  - The permanent ripple marks formed by — Wind / Water — *constantly move over* — sediment
  - On the diagram of compaction & cementation shown — Sand particles cemented 1→ sedimentary rock...
  - The composition of mud
    - Sand grains
    - Water
    - Clay
    - Silt
  - Foliated rocks have — Striped appearance caused by bands of different minerals in — metamorphic rock
  - Metamorphic rock formed by — Changes ↓ — Composition / Structure / Appearance — *due → intense* — Heat / Pressure — *on rock*
  - The name of metamorphic rocks with mineral grains in bands — Foliated rock
  - The types of weathering — & — Mechanical / Chemical
  - The results of mechanical weathering — Smaller pieces of rock but type does not change
  - Exfoliation — Outer layers of granite expand, crack& flake off, as a result of extreme weather changes
  - an important cause of mechanical weathering — Freezing / Thawing — *of water*
  - Abrasion — Mechanical weathering of rocks by
    - Gravity
    - Wind
    - Water
  - The process of breaking down exposed rocks & other materials — Weathering
  - Chemical weathering — Breaking down by mineral changes in rock
  - The most common causes of chemical weathering — Water / Oxygen / Carbo — *dioxide from* — The air
  - Rust the result of — Chemical weathering called oxidation
  - The process of carrying dissolved minerals deeper 1→ the ground — Leaching
  - Sulphuric acid fall → the earth as — Acid Rain, which harms — Plants / Fish
  - The speed of weathering across the world depend on — Climate – extremes of — Cold / Heat
  - The properties of soil
    - Particle shape
    - Size
    - Fertility
    - Acid level
  - Regolith — Loose / Weathered — *material covering the earth's surface*
  - Soil — The top layer of regolith that supports plant growth
  - Parent rock — Rock that breaks up → produce fragments ↓ soil
  - Soil support
    - Land plants
    - Trees
    - Animal life
  - The chemical compounds that make up rocks — Minerals
  - Soil essential → life B/C — It provides — Nutrients / Water — *for plants, which provide food for* — Animals / Humans
  - Factors influence the type of soil that develops
    - Parent rock
    - Weathering processes
    - Climate
    - Living organisms
    - Rate of weathering
  - a soil profile — Cross-section of the layers of soil
  - The 3 layers of mature soil — Horizons
  - Humus is found — Uppermost A Horizon
  - The Horizons exist ↓ mature soil — 4
  - The 2 most common soil organisms
    - Bacteria
    - Fungi
  - The B horizon — Subsoil containing — Minerals / Silt / Clay
  - Released by plants
    - Water
    - Oxygen
  - Released by soil organisms
    - Nitrogen
    - Phosphorus
  - The Plants use from the sun — Energy
  - Ancient people farm river deltas B/C — The ground is — Easy / Soft — *→ work*
  - Podsol — Type of forest soil formed by acidic leaching
  - Soil can be classified by — Classifying the environment in which soil was formed
  - The soil types on the map is
    - Tropical
    - Grassland & prairie
    - Desert
    - Tundra
    - Forest
    - Mountain
  - Forest soils occur in — Areas of — heavy rainfall / changing temperatures
  - The production of "loess" cause is — Moving glaciers scoured rock in the last ice age
  - Permafrost — Deep layer of subsoil ↓ the polar region which is permanently frozen
  - Laterite — Red tropical soil leached by — frequent rain / with a high content of iron oxide
  - Tropical soils occur in — Areas with — heavy rainfall / year-round warm temperatures
  - Erosion — Process by which small particles of — Soil / rock — *are displaced by moving* — Water / Wind / Ice — *The agents of erosion* — Gravity
  - The agents of erosion are
    - Water
    - Wind
    - Ice
    - Gravity
  - Mass movement — Gravity moving — Soil OR rock — *down a slope*
  - The types of mass movement
    - Landslides
    - creeps
    - slumps
    - mudflows
  - Deposition — The dropping of weathered material somewhere else
  - Rivers classified by — By how much they erode the area around them
  - a levee — Sediment deposited ↓ a ridge along — the river bank of an old mature river — during floods
  - a rill — Small channel formed when rainwater flows downhill
  - The feature of an old river — A flat floodplain
  - Alluvial fan — A fan-shaped sediment deposit — formed when — a river — flows down a steep slope on → — a broad flat area
  - The 1st sediments → drop ↓ when a river slows down — Large coarse material — such as — Rocks / Pebbles

XMind | Trial Mode